

深圳市威斯利激光设备有限公司 WISELY LASER MACHINERY LIMITED NO. 7 BUILDING, NO. 5 INDUSTRY ZONE SHUTIANPU, MATIAN, GUANGMING NEW DISTRICT, SHENZHEN 518106 CHINA T:+86-755-32998419 E:sales@wwlaser.com W:www.wwlaser.com 智•信•銳意•敢擔當——威斯利激光

Service Manual

- For Laser Marking Machine - For EzCAD Software



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WARNING

This is Class 4-level laser product, only 4-level safety engineers or anyone who got strict training is allowed to do maintenance/service for the laser machine.

To wear the Protecting Glasses / Goggle during operation is necessary.

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Errors & Solutions

1. Tip "Can not find a valid lmc device"

EzC	ad2	×
Can not find	a valid Imc device!	-
	ОК	

It means that the driver for the control card got problem or lost, we need to check it and re-install it if necessary.

Solution: You need to re-install the software or driver, please do it step by step:

(1) Please copy the software from the CD Disk / USB Stick and install it, as shown in the figure

→ * ↑	> Th	is PC > 软件 (D:) > MY20200603 >	Ezcad2		
🖈 Quick access		Name	Date modified	Туре	Size
Desktop	*	FONT	7/16/2020 4:04 PM	File folder	
- Downloads		LANG	7/16/2020 4:04 PM	File folder	
Devenesats	1	PARAM	7/16/2020 4:04 PM	File folder	
Documents	*	plug	7/16/2020 4:04 PM	File folder	
Pictures	R	- res	7/16/2020 4:04 PM	File folder	
J Music		AUTOSAVE.ezd	6/21/2020 10:40 AM	EZD File	29,561 KB
New folder		CorFile2	1/8/2018 5:19 PM	Application	4,896 KB
Videos		Custom	6/21/2020 10:47 AM	Configuration sett	1 KB
🕳 软件 (D:)		DataMgr.dll	1/8/2018 5:20 PM	Application extens	1,452 KB
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This PC		2 EzCad2	1/8/2018 5:20 PM	Application	2,788 KB
A Mada and		8L 48	1/8/2018 5:20 PM	Application	268 KB
P Network		S Lmc1.dll	1/8/2018 5:20 PM	Application extens	636 KB
		MCMIO.dll	1/8/2018 5:20 PM	Application extens	36 KB
		Mathlib.dll	1/8/2018 5:20 PM	Application extens	188 KB
		mswlaser	9/14/2018 8:58 AM	Configuration sett	0 KB
		MVAPI.dll	1/8/2018 5:20 PM	Application extens	72 KB
end EzC	Cad	to desktop, as s	shown in the 1		
Downloads	*	piug	7/16/2020 4:04 PIVI	File folder	
Documents	Я		6/21/2020 10-40 AM	F7D File	29 561 KB
Pictures	A	CorFile2	1/8/2018 5-19 PM	Application	4 896 KB
Music		Custom	6/21/2020 10:47 AM	Configuration sett	1 KB
New folder		DataMor.dll	1/8/2018 5:20 PM	Application extens	1.452 KB
Videos		default	6/21/2020 10:26 AM	Configuration sett	1 KB
🕳 软件 (D:)		EZCAD.CFG	6/21/2020 10:26 AM	CFG File	13 KB
OneDrive		2	20 PM	Application	2,788 KB
	_	Upen	20 PM	Application	268 KB
This PC		Kun as administrator	:20 PM	Application extens	636 KB
(E:)		Troubleshoot compatibility	20 PM	Application extens	36 KB
		Pin to Start	20 PM	Application extens	188 KB
Network		Scan with Windows Defend	er 8:58 AM	Configuration sett	0 KB
		🔬 👹 Add to archive	20 PM	Application extens	72 KB
		Add to "EzCad2.rar"	20 PM	Application extens	140 KB
		🚳 🝓 Compress and email	20 PM	Application extens	360 KB
		Compress to "EzCad2.rar" a	nd email :20 PM	Application extens	48 KB
		Dis to to the	20 014	Application advance	104 1/0

:20 PM

Bluetooth device Compressed (zipped) folder

Documents

Fax recipient

📑 Mail recipient

Restore previous versions

Send to

Cut

Copy

Delete

Renam

Create shortcut

25 items 1 item selected 2.72

Application extens..

Desktop (create shortcut)

720 KB



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(3) You can see the icon of "EzCad" is on the desktop of your computer



(4) Power on the machine, connect the computer with control card via USB cable, then the computer will



driver can not be installed well automatically).

(5) Find "My Computer", right-click to choose "Properties" and "Device Manager", as shown in the figure

← → × ↑ 💆 > Control I	Panel → System and Security → Sy	stem	✓ Č Search Control
Control Panel Home	View basic information	about your computer	
👂 Device Manager	Windows edition		
Remote settings	Windows 10 Pro		
System protection	© 2016 Microsoft Corporation. All rights reserved.		
Advanced system settings			VVIIICC
	System		
	Processor:	Intel(R) Core(TM) i5-4590 CPU @ 3.30GHz 3.30 GHz	
	Installed memory (RAM):	4.00 GB (3.87 GB usable)	
	System type:	64-bit Operating System, x64-based processor	
	Pen and Touch:	No Pen or Touch Input is available for this Display	
	Computer name, domain, and	workgroup settings	
	Computer name:	DESKTOP-81B6F3H	
	Full computer name:	DESKTOP-81B6F3H	
	Computer description:		
	Workgroup:	WORKGROUP	
	Windows activation		
	Windows is activated Rea	d the Microsoft Software License Terms	
	Product ID: 00331-20445-7	2100-AA111	\$
See also			
Security and Maintenance			



(6) Click "Device Manager", then right-click to choose "**Scan for hardware changes**", you will see "**Other Device / USBLMCV2**", right-click to choose "Update Driver Software **USBLMCV2**", as shown in the figure

de Action Via		
Ne Action Vie		
DESKTOP-81	B6F3H	
> 👖 Audio in	puts and outputs	
> 💻 Compute	er	
> 👝 Disk driv	es	
> 🙀 Display a	dapters	
> BVD/CD-	-ROM drives	
	ATADI anatarilar	
> TUE ATA		
Mice and	other pointing devices	
> Monitors	i oner pointing devices	
> P Network	adapters	
Other de	vices	
🛛 🕼 USBL	MCV2	
> Portable	Devices	
> 🚍 Print que	eues	
> D Processo	rs	
> Software	devices	
> 🖏 Sound, v	ideo and game controllers	
> 🚰 Storage o	controllers	
> 🛅 System d	levices	
> Universa	Serial Bus controllers	
Device Manag	er	<u>19</u> 2
Device Manag	er ew Help	-
Device Manag ile Action Vi	er ew Help 👔 🎫 🖳 💺 🗙 🖲	
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- (7) Choose Browse my computer for driver software, as shown in the figure.
 - Update Driver Software Laser Mark Control Board V4 [USB]

How do you want to search for driver software?

\rightarrow	Search automatically for updated driver software Windows will search your computer and the Internet for the latest driver software for your device, unless you've disabled this feature in your device installation settings.

 Browse my computer for driver software Locate and install driver software manually.

Cancel

Х

(8) Choose the path of Driver (remember where you put the driver), as shown in the figure





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We put the driver "Wind7-8-10_64" in D:\MY20200603\Driver\USB\LMCV4 RL 2030037\Wind7-8-10 64

÷	Update Driver Software - Laser Mark Control Board V4 [USB]	×
	Browse for driver software on your computer	
	Search for driver software in this location:	
	D:\MY20200603\Driver\USB\LMCV4_RL_2020037\WIN7-8-10_64 V Browse	
	ez — ez zersezbiorek ez des verdezin.	
	→ Let me pick from a list of device drivers on my computer This list will show installed driver software compatible with the device, and all driver software in the same category as the device.	
	Next Canc	el

(9) After finishing the driver installation, you will see "Laser Mark Control Board V4 [USB]" on "Device Manager", as shown in the figure



Now you see the driver "Laser Mark Control Board V4 [USB]" was installed successfully. Copyright©2020 Shenzhen Wisely Laser Machinery Co., Limited All Rights Reserved V20.1

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(10) Okay, you can run the software "EzCad", as shown in the figure

ZCAD EzCad2 - Shortcut		
	EzCad2.14.10	
2.14.10 - No title		_ _ ×
File Edit Draw Modify V	iew Special Laser Help	
8 🎔 🗄 🕺 🕯	16 🗿 🍯 [75] 19: 18: 18: 1위 🎇 🔳 18: 1 🔍 4, 4, 4, 4, 4	Q
Object list x Name Type		Mark parameter ×
		Fen No C On. * 0 Default On * 1 Default On * 2 Default On
		* 3 Default * 4 Default * 0 * 5 Default * 6 Default * 0
Object property ×		
Position Size[mm]		🔽 Use default param
		Current pen 0
		Mark Loop 1
Apply		Power% 50 -
		Frequency (KHz) 50
		Q Pulse Width(n 200 🛨
		Laser On TC (us) 100 📑
-		Laser Off TC (us 100 🚍
		End TC (us) 100 🛨
	8	Polygon TC (us) 50 🗮
		Apply
	N [C]Continuou Part 0 R 00:00:00 Show cor	Advance
	Light (F1) Mark (F2) V [S]Mark Sele Total O Param (F3) 00:00:00 Continue	Param name Default
No object pick	-229.720,-143.08: Sna	p Gric Guildline: Object:Of

Remarks: The user needs to re-install the driver and software after changing computer unless the user has installed the drivers for all computers already before.



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2. Tip "Can not find dongle! Software will work at demo state"

If it appears the below notice,

zCad2		×
	Can not find dog! Soft will work	at demo state.

it means the software can not connect to the control card, the reasons might be:

• There is no <u>220V/110V</u> power input to the machine before operating the machine, the control card is not on ready mode.

Solution: Just power on the machine, then open the software.

• USB Connection problem between the control card and computer.



Solution: Just check your USB Port and USB Cable if loose or not, or you can change a new USB to try.

• The Control Card itself got some problems.





<u>Solution</u>:

- $\diamond~$ Restart your machine before you run the software.
- \diamond Check if the control card shows correct green light.
- \diamond Report to our support team or the sales, we will check if need to replace a new card or not.
- The Control Card **5V switching power supply** is damaged.



Solution:

- \diamond Check if there is any light working on the control card.
- ♦ Check if the 5V switching power supply if show correct green light.
- \diamond If it not that should be damaged, replace a new 5V switching power supply is ok.

• The software gets some problems due to some other reasons:

- Computer gets virus.
- > Anti-virus software deleted some EzCAD software system file, such as *dll file.
- > Operator deletes the necessary EzCAD software system file, such as driver.
- > Operator does not run or close the software as per order of precedence.

Solution:

- ♦ Uninstall or shut down any anti-virus software in your computer directly, uninstall the driver, then re-install the driver.
- \diamond Shut down the anti-virus software before software installation.
- \diamond Don't change the computer very often, try to use one computer for the machine especially.
- ☆ Try to keep your USB stick healthy before inserting to the computer for laser marker, or the virus in the USB stick will damage the computer and break the software.
- ♦ Uninstall the software and re-install it after you connect the machine to the new computer.



3. Tip "Failed to open lmc driver"



The reasons might be:

- The <u>signal cable(It should be DB25)</u> from the fiber laser source to the control card loose or broken, check and change a new cable and have a try.
- The <u>control card</u> got problem, you need to check if there is any light flashing on the control card while the machine is running, and try to replace a good control card to do the test.
- The <u>fiber laser source</u> got damaged, you need to send it back to us for repairing or replacement.

4. Tip "soft is running"

Tip information as shown in the figure



Solution:

- ♦ Click "OK", and check the task bar to find the running EzCad.
- ✤ If the operation is invalid, please open "Task manager" (you can use Ctrl + Alt + Delete to open it), then

right click it and stop th	he process named "	Þ 2	, N	1FC Ap	plicati	on (32	bit)	, ,,
🙀 Task Manager		- 1		×				
RFC Application (32 bit)								
<table-of-contents> Microsoft Management Console</table-of-contents>								
⊘ More details			End t	ask				

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5. Tip "IPG Laser: System error"



The reasons might be:

• The 24V switching power supply does not output **DC24V** to the Fiber laser source.



Solution:

- ♦ Check if the light on the 24V switching power supply is green or not. If not, the 24V switching power supply got damaged, change a new one to try.
- ♦ If the new **24V switching power supply** does not still work, the laser source may be damaged.
- After checking all cables and power supply, and confirm they are good in condition, even we change new cables and power supply, and get the same result, the <u>fiber laser source</u> might get damaged, you need to send it back to us for repairing or replacement.
 (See attached file "How to take off the Fiber laser source")



6. No/Weak/Unstable Red Light Pointer

Open the machine case, and check the input of the red dot pointer with multi-meter, it should be around 5V. If not, the Red Light Pointer or the 5V Switching Power Supply might be damaged, you can ask for the replacement or repairing service.

Warning: This is Class 4 laser product (the red light pointer is Class 3R product), you have to power off the machine before changing the Red Light Pointer.



7. Once I change a new computer for the machine, what should I do?

Solution: You need to install the software and driver, please read the manual from Page 1 to 7.

8. I do not know what happened to my software, it can not work properly, what should I do? Solution 1: Re-install the software and Driver, please read the manual from Page 1 to 7.

Solution 2: Just check the parameter settings of the running software, then compare the software backup we sent to you with the machine, it should be in local disk (D), or you can check the original parameters in the software backup CD Disk.

You need to check the items: Field, Laser Control, Port, Other.

The windows of parameter settings will be opened once you press "F3" on the computer keyboard or click the option "Param(F3)" in the software.





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(1) Field—To check the working area if set correct compared the software back files, take 200*200mm as shown in the figure:



(2) Laser Control - You need to choose the correct "Laser Type" and Fiber Serial, as shown in the figure



NOTIFICATION: <u>If your machine adopts the Raycus fiber laser source, then you need to choose</u> "Raycus"; If your machine adopts the JPT fiber laser source, then you need to choose "JPT or <u>IPG_YLPM".</u>



(3) Port - You can choose "Start Marking IO" - "Input Port" 15, this for your Foot Switch, as shown below:

- Stop mark input port	Laser power IO
Stop prompt message	Port NULL -
212	
217	
	Inport NULL THIGH
5 17	Marking IO
6 IZ	Outort NULL - HIGH
7 🔽	Marking Finish IO
Outport NULL -	Outort NULL - HIGH
	Pulse width 10 ms
	Start Mark IO
	Inport 15 -
Laser Ready IO	Pulse Mode
Inport NULL I HIGH	
Outport NULL - HIGH	

(4) Other—You can set the parameters for the Red Light Pointer, as shown in the figure.

xdify View Specie xdify View Sp	al Laser Help	
	Enable provide the second seco	, ·



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9. I don't find the focal length, what should I do?

Solution 1: Open the software and Draw a Φ 8mm circle, then hatch (line distance 0.05). Raise or Lower the Z Column until it shows the strongest and loudest laser shooting, as shown below:



Solution 2: Measure the distance from the surface of objects to the middle of the scanner, then record the distance, a sticker will be of help.



<u>Solution 3:</u> Raise or lower the Z Column until the two Red Dot Pointers are overlapping, you will see one dot only, as shown in the figure.





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10. If the outer red light is offset, how to calibrate it?

Tip: If you find the two pointer can not get together, the outer red pointer may be offset a little. As shown in the figure.



Solution:

♦ Use solutions 9.1 or 9.2 to find the correct focus, then use wrench to adjust this holder to that make the two Red Dots be overlapping. As shown in the figure.



 \diamond You can find the focal length easily next time with solution 9.3. As shown in the figure.





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11. If the inner red light is offset, how to calibrate it?

Solution:

(1) If the X Red light is offset, you should open the F3 parameter, select "Other", click "Red light pointer", and enter measured value in "Offset Pos X", as shown below:

Y Marking For example 2mm, you write in Offset Pos X: 2	Field Laser Control Port Other HardInfo Start Mark Delay 0 ms Fily Mark Finish Mark Delay 0 ms Fily Mark Min Power De Red light pointer X Max Power De Enable Show contour Red light pointer Max Freq Dela Enable continue mark mode Red light pointer Laser sleep tin Enable always show ne 47 Max speed 1ight Speed 3000 mm/s offset Pos X 2.000 mm Offset Pos X 2.000 mm Size ScaleX 1.000 Size ScaleX 1.000 size ScaleX 1000 mm Show start Size ScaleX 1.000 Size ScaleY 1.000 100 us Disable mai Auto reset r OK Cancel 100 us Disable opt OK Cancel Enable use hard input signal Enable use hard input signal
X	确定 取消 应用(A)

(2) If the Y Red light is offset, you should open the F3 parameter, select "Other", click "Red light pointer", and enter the measured value in "Offset Pos Y", as shown below:

Y Marking Red For example -2mm, you write in Offset Pos Y: -2	Configuration Parameters mar Field Laser Control Port Start Mark Delay Finish Mark Delay Min Power Delay Max Powe Red light pointe Max Freq	Cother HardInfo	×	Fly Ma Red light	ark
	Laser sleer Finable Sh Max speed Min speed Curve scat light Speed Offset Pos Show s Enable Disable Disable Disable Enable Enable Enable Enable Enable Enable Enable Enable Enable Enable Enable Enable	ow contour ntinue mark mode ways show 3000 mm/s X 0.000 mm 1.000 1.000 Cancel gnal	rk time t num ≄ analog o	47 178357 current fpk 100	Seco us
			确定	取消	应用(



12. If the marking size is not correct, how to calibrate the Galvohead (Scanner)?

Solution 1: According to the parameters of we have burned into the CD Disk, you can reset the parameters in the software.

Solution 2: Press "F3" on the keyboard, or click the "param(F3)" on the software.

12.1 Open the software



12.2 Focus

Raise or lower the Z Column until the two Red Dot Pointers on the products are overlapping, then you will only see one dot, as shown in the figure.





12.3 In the **F3 parameter**, change the "<u>Field Size</u>" according to the field of focal lens. For example, if you uses the **150*150mm** focal lens.

Configuration Parameters markcfg0

mm Galvo1=X	C No Move
Nº Odivor-A	
mm C Galvo2=X	Galvo Center
mm	C Left Up
 Degree	
	C Galvo2=X Degree

12.4 Click Galvo2=X

Configuration Parameters markcfg0

spect		_		After Mark Goto
Field Size	150.00	mm	C Galvo1=X	C No Move
Offset X	0.000	mm	Galvo2=X Galvo2=X	Galvo Center
Offset Y	0.000	mm		C Left Up
Angle	0.000	 Degr	ee	
Use cor	rect file			C Right Up



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12.5 In the software work area, draw 150*150 rectangle and mark it, as shown in the figure.







12.6 Measure the X/Y side length of the rectangle, and open the F3 parameter.

12.6.1 Confirming if the X side line is straight or not, if not, you can adjust the parameter, as shown below:



Tip: If the line of X side is convex, you should increase the parameter. If the line is concave, the parameter should be decreased.

Confirming if the Y side lines are straight or not, if not, the parameter should be adjusted, as shown below:

Galvo	1	Galvo 2
	☐ Negate	<mark>∏ N</mark> egate
Scale	100.0000 >>	Scale 100.671 >>
\bigcirc	1.0000	1.0000
Ф	1.0000	口 [1.0000
Ф	1.0000	□ □ □.0000

Tip: If the line of Y side is convex, you should increase the parameter. If the line is concave, the parameter should be decreased.



12.6.2 Checking if two lines on X side are equal or not, if not, you can adjust the parameter, as shown below:



If 1 line is longer than 2 line, the parameter should be decreased. If 2 line is longer, the parameter is increased.

Check if two lines on Y side are equal or not, if not, the parameter should be adjusted, as shown below:



If 4 line is longer than 3 line, the parameter should be decreased. If 3 line is longer, the parameter is increased.



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Scale 100.0000 >> , fill in 12.6.3 If the length of X side that you marked on the product is **149mm**, you need to click "149" to the "Real Mark Size", as shown in the figure.

Aspect Field Size	150.00	 mm ⊙ Galvo1=X	After Mark Goto
Offset X	0.000	mm C Galvo2=X	C Galvo Center
Offset Y	0.000	mm	
Angle	0.000	Degree	Calculate scale X
Galvo 1 —	Negate	Galvo 2	keal mark size
Scale 10	Negate 0.0000 > 0000	Galvo 2 Negati Scale 100.671 1.0000	keal mark size [149.000 v 0.000 v 0.000 Password
ialvo 1 5cale 10 0 1.0	Negate 0.0000 > 0000	Galvo 2 Negati Scale 100.671 1.0000 1.0000	Keal mark size [149.000 × γ 0.000 Password

Galvo 1 ☐ Negate

Galvo 2 □ Negate

If the length of Y side that you marked is 151mm, you should click scale 100.000 >>>, fill in "151" to the "Real mark size", as show in the figure.

spect			After Mark Goto	
Field Size	150.00	mm C ColucteX	• No Move	
Offset X	0.000	(• Galvo1=X	C. Galvo Center	
Offset Y	0.000	Galvo2=X		
nale	0.000	 Degree	C Left Up	
Use cor	rect file	Calculate scale	C. Right Up	
ialvo 1 — Scale 10	Negate 0.0000 > 0000	Ge 1150.000 Real mark size 151 Sc 7 1.0000	Cancel	

Notice: The steps can be repeated 3 to 4 times.



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13. How to use the rotary device?

(1) Open the software.



(2) Focus

Fix the rotary device: Ensure that the laser focus on the highest point of the rotating workpiece, as shown in the figure.





(3) Make sure the rotary axis and scanner are vertical to each other, as shown in the figure.



(4) Set a text file in the software, as shown in the figure.



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(5) Set the marking speed and frequency parameters.

	0	
Mark Loop	1	<u>·</u>
Speed(mm/s)	1500	<u>.</u>
Power%	50	<u>.</u>
Frequency(KHz)	50	÷
Laser On TC(us)	100	÷
Laser Off TC(us	100	<u>·</u>
End TC(us)	100	<u>·</u>
Palana TC(ua)	50	<u> </u>

Then click "Advanced" to set the jump speed and other parameters of the galvanometer.

ump Speed	150		│ ₩obble		_
Kin jump delay	10	us	Diameter	1.000	mm
lax jump delay	85	us	Distance	0.500	mm
Max limit length	10.000		End Add Poi	nts	
tat 11mit 10mgth	1		Count	1	1
			Distance	0.010	
			Point time	1.000	
			Point Cycles	1	-
			Point time	0.100	ms
🥅 Enable optimi:	ze mode	1	vector poin	nt mode	
Start length	0		Pulse per poir	nt 1	
and length	0	mm		. ,	
	89	deg	Iag Uptimi	ıze mode	
	89	deg			

Note: if your file has no outlines, please set it to a speed of 10-50 to make sure it is marked without distortion. If your file has an outlines, the jump speed can be 100-500.



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(6) If a file is marked for rotation, you should change the angle of the file. Make sure the fill direction is consistent with the Scan direction.



(7) Click "Laser ", select "SplitMark2", click "param(F3)".

MarkDemo version		Configuration Parameters markcfg0	×
MarkDemo version Part R Time part 0 00:00:00 Time Total 0 00:00:00 Time Total 0 00:00:00 Time Total 0 00:00:00 Time Total 0 Mark Selected Force split ✓ Force all split 50.000 mm • art Diamete 50.000 mm 0.100 00	Y 0.000 Special pos 0.000 Goto special position when finish Axis step 5.00 ▼ Split Size Y 1	Configuration Parameters markcfg0 External Axis1 External Axis2 HardInfo □	Image: Rotate Axis Gear Ratio 1 Part Diameter 50 mm Image: Rotate Axis 3000 pulse/s Zero Offset 0 mm Zero time out 10 s Image: Rotate Zero 1.000 mm Space Comp. 0 mm
Light (F1) Mark (F2)	Param(F3) Quit(F5)	-	Shear Comp. 0.000 mm



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(8) Set the parameter

Enable	✓ Invert		I Rotate Axis Gear Ratio	1	-
			Part Diameter	50	mm
Step per rotation	12800	mm	— 7		
Min Coor.	-100000	mm	l∨ Zero Zero Speed	3000	 pulse/s
Max Coor.	100000	mm	Zero Offset	0	
Min Speed	100	pulse/s	Zero time out	10	s
Max Speed	5000	pulse/s	C Accurate Zero		
Acc. time	200	ms			-94
I Finish goto star	t postion		Scale Comp.	1.000	
Speed	d 5000	pulse/s	Space Comp.	0	 mm
			Shear Comp.	0.000	- mm

Note: The "**ID**" is your marking direction, "**Part Diameter**" is workpiece diameter. Other parameter, you can directly set the parameters according to your requirement.

(9) Mark

Light (F1) Mark (F2)	Param(F3) Quit(F5)
- BF	
Z I	
山	-
VIS	
The second se	U.L



14. Daily Maintenance

After a few time, you should do some daily maintenance as follows:

- (1) Electrical control system works well connection checking.
- (2) Computer system works well virus checking.
- (3) Marking software works well parameter settings checking.
- (4) Elevating platform does not loose, screw does not loose and drop.
- (5) Air cooling system for fiber laser source works well cooling checking.
- (6) Do not squeeze fiber, be sure the protecting cover is good.
- (7) Keep lens clean.
- (8) Keep equipment clean.



The above parameter settings are just for your reference, you need to set the correct parameters for machine as per the machine you ordered. Under the ordinary circumstance, we will set the parameters well before delivery and copy a DVD Disk for your software backup.

If necessary, please do not hesitate to contact the salesman who sold you the machine or the service team from Wisely Laser - service@wwlaser.hk.

Thank you very much!